

Amendments to the Claims:

The following listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Currently Amended) A game system which executes a computer program to generate an electronic image to provide more realistic view on a display screen, comprising:
 - means which transforms a depth ~~value~~value, comprising a plurality bits, of each pixel of an original image into a second depth value or an alternative second depth value, both being formed of the lower bits I to J of the depth value which are positioned lower than ~~the most~~ most significant bit of the depth value;
 - means which sets an alpha value of each pixel to a value corresponding to the second depth value or the alternative second depth value; and
 - means which generates the electronic image based on the set alpha value, wherein the bits I to J are an intermediate set of bits, ~~obtained depending on a focus position of a virtual camera~~, and are below the uppermost bit and above the lowermost ~~bit~~ bit of the depth value,
 - wherein, when the depth value is within a predetermined range, the depth value is transformed into the second depth value, and, when the depth value is outside of the predetermined range, the depth value is transformed into the alternative second depth value,
 - the predetermined range includes a depth value of a focus position of a virtual camera, and
 - a number of threshold steps of the second depth value is greater than a number of threshold steps of the alternative second depth value.
2. (Original) The game system as defined in claim 1,

wherein the original image is blended with a defocused image of the original image based on the alpha value set for each pixel.

3. (Original) The game system as defined in claim 2,

wherein the defocused image of the original image is generated by setting the original image as a texture and shifting texture coordinates of a virtual object when the texture is mapped onto the virtual object by texel interpolation method.

4. (Currently Amended) The game system as defined in claim 1,

wherein the alternative second depth value is clamped into a given value depending on a bit value other than the bits I to J in the depth value.

5. (Currently Amended) The game system as defined in claim 1,

wherein the depth value is set as an index number in a lookup table for index color texture-mapping; and

wherein the depth value is transformed into the second depth value or the alternative second depth value by performing index color texture-mapping on a virtual object by using the lookup table.

6. (Currently Amended) The game system as defined in claim 1, wherein:

bits M to N in the depth value are set as an index number in a first lookup table for index color texture-mapping;

the depth value is transformed into a third depth value by performing index color texture-mapping on a virtual object by using the first lookup table;

bits K to L (where $K \geq I \geq L > M \geq J \geq N$) in the depth value are set as an index number in a second lookup table for index color texture-mapping;

the depth value is transformed into a fourth depth value by performing index color texture-mapping on a virtual object by using the second lookup table; and

the third and fourth depth values are used to determine the second depth value or the alternative second depth value.

7. (Currently Amended) A game system which executes a computer program to generate an electronic image to provide more realistic view on a display screen, comprising:

means which sets bits M to N in given image information as an index number in a first lookup table for index color texture-mapping, and uses the first lookup table to perform index color texture-mapping on a virtual object to transform the image information into third image information;

means which sets bits K to L in the image information as an index number in a second lookup table for index color texture-mapping, and uses the second lookup table to perform index color texture-mapping on a virtual object to transform the image information into fourth image information; and

means which ~~determines~~ transforms the image information into second image information or alternative second image information formed of the bits I to J (where $K \geq I \geq L > M \geq J \geq N$) in the image information based on the third and fourth image ~~information,~~ information, ~~wherein bits I to J are obtained depending on a focus position of a virtual camera.~~

wherein, when a depth value, which is one of the image information, is within a predetermined range, the image information is transformed into the second image information and, when a depth value, which is one of the image information, is outside of the predetermined range, the image information is transformed into the alternative second image information,

the predetermined range includes a depth value of a focus position of a virtual camera, and

a number of threshold steps of the second image information is greater than a number of threshold steps of the alternative second image information.

8. (Previously Presented) The game system as defined in claim 5,
wherein the virtual object is a polygon having a size equal to a size of the display screen.
9. (Previously Presented) The game system as defined in claim 7,
wherein the virtual object is a polygon having a size equal to a size of the display screen.
10. (Previously Presented) The game system as defined in claim 5,
wherein the virtual object is a polygon having a size equal to a size of a block obtained by dividing the display screen into blocks.
11. (Previously Presented) The game system as defined in claim 7,
wherein the virtual object is a polygon having a size equal to a size of a block obtained by dividing the display screen into blocks.
12. (Currently Amended) A computer-usable program embodied on an information storage medium or in a computer-executable signal capable of being transmitted by a transmitter and received by a receiver to generate an electronic image on a display screen, comprising a processing routine for a computer to realize:

means which transforms a depth ~~value~~ of value, comprising a plurality bits, of each pixel of an original image into a second depth value and an alternative second depth value, both formed of the lower bits I to J of the depth value which are positioned lower than ~~the most~~ most significant bit of the depth value;

means which sets an alpha value of each pixel to a value corresponding to the second depth value or the alternative second depth value; ~~and~~

means which generates an image based on the set alpha value, wherein the bits I to J are an intermediate set of bits, ~~obtained depending on a focus position of a virtual camera,~~ and are below the uppermost bit and above the lowermost ~~bit~~ bit of the depth value,

wherein, when the depth value is within a predetermined range, the depth value is transformed into the second depth value, and, when the depth value is outside of the predetermined range, the depth value is transformed into the alternative second depth value,

the predetermined range includes a depth value of a focus position of a virtual camera, and

a number of threshold steps of the second depth value is greater than a number of threshold steps of the alternative second depth value.

13. (Original) The program as defined in claim 12,

wherein the original image is blended with a defocused image of the original image based on the alpha value set for each pixel.

14. (Original) The program as defined in claim 13,

wherein the defocused image of the original image is generated by setting the original image as a texture and shifting texture coordinates of a virtual object when the texture is mapped onto the virtual object by texel interpolation method.

15. (Currently Amended) The program as defined in claim 12,

wherein the alternative second depth value is clamped into a given value depending on a bit value other than the bits I to J in the depth value.

16. (Currently Amended) The program as defined in claim 12,

wherein the depth value is set as an index number in a lookup table for index color texture-mapping; and

wherein the depth value is transformed into the second depth value or the alternative second depth value by performing index color texture-mapping on a virtual object by using the lookup table.

17. (Currently Amended) The program as defined in claim 12, wherein:

bits M to N in the depth value are set as an index number in a first lookup table for index color texture-mapping;

the depth value is transformed into a third depth value by performing index color texture-mapping on a virtual object by using the first lookup table;

bits K to L (where $K \geq I \geq L > M \geq J \geq N$) in the depth value are set as an index number in a second lookup table for index color texture-mapping;

the depth value is transformed into a fourth depth value by performing index color texture-mapping on a virtual object by using the second lookup table; and

the third and fourth depth values are used to determine the second depth value or the alternative second depth value.

18. (Currently Amended) A computer-usable program embodied on an information storage medium or in a computer-executable signal capable of being transmitted by a transmitter and received by a receiver to generate an electronic image on a display screen, comprising a processing routine for a computer to realize:

means which sets bits M to N in given image information as an index number in a first lookup table for index color texture-mapping, and uses the first lookup table to perform index color texture-mapping on a virtual object to transform the image information into third image information;

means which sets bits K to L in the image information as an index number in a second lookup table for index color texture-mapping, and uses the second lookup table to

perform index color texture-mapping on a virtual object to transform the image information into fourth image information; and

means which ~~determines~~ transforms the image information into second image information or alternative second image information formed of the bits I to J (where $K \geq I \geq L > M \geq J \geq N$) in the image information based on the third and fourth image ~~information~~, wherein bits I to J are ~~obtained depending on a focus position of a virtual camera information~~,

wherein, when a depth value, which is one of the image information, is within a predetermined range, the image information is transformed into the second image information and, when a depth value, which is one of the image information, is outside of the predetermined range, the image information is transformed into the alternative second image information,

the predetermined range includes a depth value of a focus position of a virtual camera, and

a number of threshold steps of the second image information is greater than a number of threshold steps of the alternative second image information.

19. (Original) The program as defined in claim 16,
wherein the virtual object is a polygon having a size equal to a size of a display screen.

20. (Original) The program as defined in claim 18,
wherein the virtual object is a polygon having a size equal to a size of a display screen.

21. (Original) The game system as defined in claim 16,
wherein the virtual object is a polygon having a size equal to a size of a block obtained by dividing a display screen into blocks.

22. (Original) The program as defined in claim 18,
wherein the virtual object is a polygon having a size equal to a size of a block obtained by dividing a display screen into blocks.

23. (Currently Amended) A method of generating an electronic image to provide more realistic view on a display screen, comprising a step of:

transforming a depth value, comprising a plurality bits, of each pixel of an original image into a second depth value, or an alternative second depth value, both being formed of the lower bits I to J of the depth value which are positioned lower than the most significant bit of the depth value;

setting an alpha value of each pixel to a value corresponding to the second depth value or the alternative second depth value; and

generating the electronic image based on the set alpha value, wherein the bits I to J are an intermediate set of bits, obtained depending on a focus position of a virtual camera, and are below the uppermost bit and above the lowermost bit of the depth value,

wherein, when the depth value is within a predetermined range, the depth value is transformed into the second depth value, and, when the depth value is outside of the predetermined range, the depth value is transformed into the alternative second depth value,

the predetermined range includes a depth value of a focus position of a virtual camera, and

a number of threshold steps of the second depth value is greater than a number of threshold steps of the alternative second depth value.

24. (Original) The method as defined in claim 23,
wherein the original image is blended with a defocused image of the original image based on the alpha value set for each pixel.

25. (Original) The method as defined in claim 24,
wherein the defocused image of the original image is generated by setting the original image as a texture and shifting texture coordinates of a virtual object when the texture is mapped onto the virtual object by texel interpolation method.

26. (Currently Amended) The method as defined in claim 23,
wherein the alternative second depth value is clamped into a given value depending on a bit value other than the bits I to J in the depth value.

27. (Currently Amended) The method as defined in claim 23,
wherein the depth value is set as an index number in a lookup table for index color texture-mapping; and
wherein the depth value is transformed into the second depth value or the alternative second depth value by performing index color texture-mapping on a virtual object by using the lookup table.

28. (Currently Amended) The method as defined in claim 23, wherein:
bits M to N in the depth value are set as an index number in a first lookup table for index color texture-mapping;
the depth value is transformed into a third depth value by performing index color texture-mapping on a virtual object by using the first lookup table;
bits K to L (where $K \geq I \geq L > M \geq J \geq N$) in the depth value are set as an index number in a second lookup table for index color texture-mapping;
the depth value is transformed into a fourth depth value by performing index color texture-mapping on a virtual object by using the second lookup table; and
the third and fourth depth values are used to determine the second depth value or the alternative second depth value.

29. (Currently Amended) A method of generating an electronic image to provide more realistic view on a display screen, comprising a step of:

setting bits M to N in given image information as an index number in a first lookup table for index color texture-mapping;

using the first lookup table to perform index color texture-mapping on a virtual object to transform the image information into third image information;

setting bits K to L in the image information as an index number in a second lookup table for index color texture-mapping;

using the second lookup table to perform index color texture-mapping on a virtual object to transform the image information into fourth image information; and

~~determining~~means which transforms the image information into second image information or alternative second image information formed of the bits I to J (where $K \geq I \geq L > M \geq J \geq N$) in the image information based on the third and fourth image information; ~~wherein bits I to J are obtained depending on a focus position of a virtual camera information;~~

wherein, when a depth value, which is one of the image information, is within a predetermined range, the image information is transformed into the second image information and, when a depth value, which is one of the image information, is outside of the predetermined range, the image information is transformed into the alternative second image information,

the predetermined range includes a depth value of a focus position of a virtual camera, and

a number of threshold steps of the second image information is greater than a number of threshold steps of the alternative second image information.

30. (Previously Presented) The method as defined in claim 27,

wherein the virtual object is a polygon having a size equal to a size of the display screen.

31. (Previously Presented) The method as defined in claim 29,
wherein the virtual object is a polygon having a size equal to a size of the display screen.

32. (Previously Presented) The method as defined in claim 27,
wherein the virtual object is a polygon having a size equal to a size of a block obtained by dividing the display screen into blocks.

33. (Previously Presented) The method as defined in claim 29,
wherein the virtual object is a polygon having a size equal to a size of a block obtained by dividing the display screen into blocks.